

**ABSTRACT****PLANARIZATION OF AN IMAGE DETECTOR DEVICE FOR IMPROVED  
SPECTRAL RESPONSE**

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An image sensor device (100) is described comprising a semiconductor substrate (1), a MOS-based pixel structure and a planarization layer (30) on top. The planarization layer (30) is provided to avoid lensing due to the roughness of the pixel structure surface. The planarization layer (30) may be  
10 further optimized by adapting its thickness and refractive index to obtain anti-reflective coating properties for some regions in the image sensor device. This allows increasing the quantum efficiency and the spectral response of the image sensor device significantly.

15 + Fig. 4